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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,645	08/21/2003	J. Patrick Thompson	MSFT-1752/302730.01	9793
41505 7590 03/22/2007 WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION) CIRA CENTRE, 12TH FLOOR 2929 ARCH STREET PHILADELPHIA, PA 19104-2891			EXAMINER RADTKE, MARK A	
			ART UNIT 2165	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/646,645

Applicant(s)

THOMPSON ET AL.

Examiner

Mark A. X Radtke

Art Unit

2165

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>20070119</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Remarks***

1. In response to communications filed on 3 January 2007, claim(s) 1-11, 14-19, 21 and 24-29 is/are amended per Applicant's request. Therefore, claims 1-30 are presently pending in the application, of which, claim(s) 1, 11 and 21 is/are presented in independent form.

2. Per Applicant's request, U.S. Application Publication No. 2004/0024795 A1 has been considered. In response to Applicant's amendments, the double-patenting rejection and the rejections under 35 U.S.C. 112, second paragraph have been withdrawn. Despite Applicant's assertion that the rejection under 35 U.S.C. 101 has been overcome, the amendments do not correct the abstract nature of the claims and so the rejection has been upheld.

### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-30 are rejected under 35 U.S.C. 101 because they recite interconnecting Items with Relationships and managing said Relationships, which presents an "abstract idea" which does not necessarily require a technology. A claim

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must not be directed merely to an abstract idea, but must instead be tied to a computer, environment, or machine, which would result in a practical application producing a concrete, useful and tangible result. "Items" having "Relationships", "owners" and "targets" are basic elements of the thought process and so are abstract *per se*. The preamble of the claims may recite a tangible embodiment ("hardware/software interface system"), but the preamble is considered an indication of intended use and is not given patentable weight. The steps of the claim do not functionally require a physical embodiment and "managing said Relationships" does not functionally relate to a "hardware/software interface system level".

5. The Items are not connected in a deterministically defined way, thus the claims lack concreteness. Items may be "interconnected" and "managed" in any number of ways; performing the steps of the process multiple times will produce different results. "Managing" Relationships has no stated, implied or well-known usefulness, thus the claims lack utility. A managed Relationship requires no tangible embodiment and is not a tangible result, thus the claims lack a tangible embodiment. Typical tangible results include "storing" or "displaying" a result. "Interconnecting" and "managing" are not concrete, useful or tangible results.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Bernstein et al. ("The Microsoft Repository", Proceedings of the 23rd VLDB Conference, 1997, available online at <http://citeseer.ist.psu.edu/bernstein97microsoft.html>).

As to claim 1, Bernstein et al. teaches a method for manipulating a plurality of discrete units of information, Items, in a hardware/software interface system for a computer system (see Abstract), said method comprising interconnecting said Items (see page 6, left column, bullet 2, Repository Object) with a plurality of Relationships (see page 6, left column, bullet 4, Relationship Object, "represents a connection"), each Relationship being between a source Item and a target Item, the target Item having an associated reference count;

determining the lifetime of each target Item based on the associated reference count;

maintaining storage of each target Item based on the lifetime (see page 9, left column, paragraph 2, lines 3-9, "However, if the delete propagation flag is set..."); and

managing said Relationships at the hardware/software interface system level (see page 7, left column, final paragraph, final sentence, "the repository supports [...] configuration management").

As to claims 2, 12 and 22, Bernstein et al. teaches wherein each Relationship from among said plurality of Relationships constitutes, at the hardware/software interface system level, a mapping between a pair of Items that said Relationship interconnects (see page 6, left column, bullet 4, Relationship Object, "represents a connection between **two** repository objects", *emph. added*).

As to claims 3, 13 and 23, Bernstein et al. teaches wherein each Relationship has properties (see page 6, left column, bullet 4, Relationship Object, "A relationship can have properties").

As to claims 4, 14 and 24, Bernstein et al. teaches wherein each Relationship comprises a target property for the identification of the target Item of said Relationship (see page 8, left column, section "Relationship Objects", paragraph 3, line 5, "The repository object [...] you traverse to is called the target" and see figure 4).

As to claims 5, 15 and 25, Bernstein et al. teaches wherein each Relationship further comprises an ownership property corresponding to an ownership of said target

Item (see page 6, figure 2, "Owner" and see page 11, section 5, paragraph 2, line 6, "Owner").

As to claims 6, 16 and 26, Bernstein et al. teaches wherein the hardware/software interface system automatically establishes a Relationship between each pair of Items in which each of the Items in the pair of Items has a common value for a common property (See page 8, right column, paragraphs 2-3 and see figure 5. "IrepositoryObject assigns the same name to that Name property and to all naming relationships to that object." Using named relationships, each Relationship established will have a common value ("the same name") for a common property (Name)).

As to claims 7, 17 and 27, Bernstein et al. teaches wherein the hardware/software interface system automatically establishes a Relationship between each pair of Items in which each of the Items in the pair of Items has a common property (See page 5, left column, section 2.2, paragraph 3 and see pages 7-8, spanning paragraph. Properties are inherited from Interfaces to Repository Objects).

As to claims 8, 18 and 28, Bernstein et al. teaches wherein each Item has an Item type, and the hardware/software interface system automatically establishes a Relationship between each pair of Items in which each of the Items in the pair of Items has the same Item type (See figure 2. IProject and IProjectItem are related and both contain Projects).

As to claims 9, 19 and 29, Bernstein et al. teaches wherein each Item has an item type, and the hardware/software interface system automatically establishes a Relationship between each pair of Items in which each of the Items in the pair of Items has a common parent Item type (See pages 7-8, section 3.3, particularly paragraph 3. The class hierarchy establishes Relationships between siblings).

As to claims 10, 20 and 30, Bernstein et al. teaches wherein the hardware/software interface system automatically establishes a Relationship between each pair of Items based on a user-defined parameter (see page 9, left column, section "Support for IUnknown", line 4, "custom interfaces").

As to claim 11, Bernstein et al. teaches a computer-readable medium with computer-readable instructions for a hardware/software interface system for a computer system (see Abstract),

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 1 above.

As to claim 21, Bernstein et al. teaches a hardware/software interface system, for use in a computer system (see Abstract),

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 1 above.



### ***Response to Arguments***

8. Applicant's arguments filed on 3 January 2007 with respect to the rejected claims in view of the cited references have been fully considered but are not deemed persuasive.

In response to Applicant's arguments that Bernstein et al. "fails to disclose or suggest such a target Item having an associated reference count that is used to determine the lifetime of the target Item", the arguments have been fully considered but are not deemed persuasive. Specifically, Applicant argues that "the Count collection method is not a reference count that is associated with a target Item and used to determine the lifetime of the target Item". As stated at bullet 2 of section 2.2 in Bernstein et al., Count "returns the cardinality of the collection". That means that Count reports the number of elements in a given collection or relationship. Since relationships are comprised of source and target Items, the target Items have "a reference count that is associated with a target Item". In paragraph 2 of the left column of page 9, the Delete method is discussed. When "the relationship is the last relationship of its type that points to the destination object, then the destination object is deleted too." Deleting the destination ("target") object is equivalent to determining its lifetime.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications should be directed to the examiner, Mark A. Radtke. The examiner's telephone number is (571) 272-7163, and the examiner can normally be reached between 9 AM and 5 PM, Monday through Friday.

If attempts to contact the examiner are unsuccessful, the examiner's supervisor, Jeffrey Gaffin, can be reached at (571) 272-4146.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Customer Service at (800) 786-9199.

maxr  
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18 March 2007

TM  
3/18/07

  
HOSAIN ALAM  
SUPERVISORY PATENT EXAMINER